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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,537	09/15/2003	Raita Doi	040894-5955	8035
9629	7590	12/13/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			TAWFIK, SAMEH	
			ART UNIT	PAPER NUMBER
			3721	
DATE MAILED: 12/13/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,537

Applicant(s)

DOI, RAITA

Examiner

Sameh H. Tawfik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 12-15, 17 and 22-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16, 18-21 and 31-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Drawings

The drawings were received on 8/18/2004. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 16, 18-21, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viens (5,554,094).

Viens discloses a sheet folding apparatus comprising a sheet folding unit which can apply at least letter folding on a sheet (Figs. 1, 2-4, 5A, 5B, and 6A); and selectively cause the sheet folding unit to operate in a letter folding shape (Figs. 1-4; column 4, lines 40-44); wherein a plurality of modes of folding can be applied on the sheet by a single sheet path (Figs. 5B, 6B, 7B; via same stations for all different modes 5a, 5b, 6a, 6b, 7a, and 7b). Viens does not disclose that a folding mode selecting device, which can selectively cause the sheet folding unit to operate in a letter folding mode. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's sheet folding apparatus by having a folding mode selecting device, which can selectively cause the sheet folding unit to operate in a letter folding mode, to easily switch from one mode to another without using hand's power and since it has been held that broadly providing a mechanical or automatic means to

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replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Regarding claim 2: further comprising a control device which controls the sheet folding unit in accordance with a folding mode selected by the folding mode selecting device (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 3: wherein the letter folding includes at least one of letter C-folding (Fig. 3) and letter Z-folding (Fig. 2), and see for example (column 2, lines 21-23).

Regarding claim 4: wherein the sheet folding unit (12) comprises a plurality of folding mechanisms in a sheet path (Figs. 5A and 5B).

Regarding claim 5: wherein at least one of the folding mechanisms comprises a folding position changing mechanism which can change a sheet folding position (Figs. 5A; via adjustable stop 74 and 86).

Regarding claim 6: wherein among the folding mechanisms an upstream folding mechanism comprises a skew correcting mechanism which applies skew correction on the sheet (Figs. 5A and 5e) via when the sheets stop by the adjustable stop 86 will cause the sheet to curve and fold as shown in Fig. 5e.

Regarding claim 7: wherein at least one of the folding mechanisms comprises a folding member which is disposed in a sheet path to nip-transport the sheet (Fig. 5A; via 80 and 90); a transport member (Fig. 5A; via in-feed device 42, 60, 62 and nip 76) which is disposed in the sheet path upstream from the folding member (80 and 90) to nip-transport the sheet; and a tip

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end guide member (via adjustable stop 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet.

Regarding claim 8: wherein the folding mechanism comprises a folding position changing mechanism which moves the tip end guide member (86) that is movable, to enable a sheet folding position to be changed (Fig. 5B).

Regarding claim 9: wherein in the folding mechanism (80 and 90) a skew correcting mechanism which applies skew correction on the sheet configured by the transport member which can perform nipping (via 76) and releasing operations, and the tip end guide member (86), see for example (Figs. 5A and 5e).

Regarding claim 10: wherein after tip end of the sheet butts against the tip end guide member (86), the skew correcting mechanism causes the transport member (76) to transport the sheet by a short distance to form a loop on a side of the tip end of the sheet (Fig. 5e) and thereafter causes the transport member to perform the releasing operation (Figs. 5A and 5e; via to allow the sheets to go through the folding mechanism 80 and 90).

Regarding claim 11: wherein a feeding mechanism nips the sheet that has subjected to skew correction by the skew correcting mechanism, by the transport member (via nip 76) and feeds the sheet that has been subjected to skew correction to the folding member (Figs. 5A and 5e; via 80 and 90). Viens does not disclose that setting a transportation speed of the transport member to a speed which is equal to or lower than a speed of the folding member. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's folding apparatus by setting a transportation speed of the transport member to a speed which is equal to or lower than a speed of the folding member, as a

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matter of engineering design choice, since the examiner takes an official notice that having two different speed in same apparatus such as the feeding speed different than the folding speed is old, well known, and available in the art, in order to improve and avoid any jam in the folding apparatus.

Regarding claim 18: further comprising a sheet folding postprocessing apparatus (Fig. 5A; via 12) which applies a predetermined postprocess on a sheet that has been subjected to a folding process by the sheet folding apparatus, see for example (Figs. 1 and 5A).

Regarding claim 19: further comprising a control device which controls at least the sheet folding apparatus and the sheet folding postprocessing apparatus in accordance with a postprocessing mode applied on the sheet (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 20: wherein the control device houses a letter-folded sheet into a sheet accommodating device in the sheet folding apparatus, under conditions of performing a letter folding process on the sheet by the sheet folding apparatus (Figs. 2-4, 5A, and 5B).

Regarding claim 21: wherein the control device guides a folded sheet to the sheet folding postprocessing apparatus, under conditions of performing Z-folding (Fig. 2) other than letter folding on the sheet by the sheet folding apparatus (Fig. 5A).

Regarding claim 31: wherein the plurality of modes of folding include letter C-folding, letter Z-folding and size A3 Z-folding (Figs. 5B, 6B, and 7B).

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Regarding claim 32: wherein the sheet folding unit includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a plurality of modes of folding can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A)

Regarding claim 33: Viens discloses the sheet folding unit includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a plurality of modes of folding can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A). Viens does not disclose that a folding mode selecting device, which can selectively cause the sheet folding unit to operate in a letter folding mode. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's sheet folding apparatus by having a folding mode selecting device, which can selectively cause the sheet folding unit to operate in a letter folding mode, to easily switch from one mode to another without using hand's power and since it has been held that broadly providing a mechanical or

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automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Response to Arguments

Applicant's arguments filed 10/20/2004 have been fully considered but they are not persuasive.

Applicant argues in page 10 of the arguments that Viens's reference does not teach or suggest "a folding mode...wherein a plurality of modes of folding can be applied on the sheet by a single sheet path,". These are new added limitations to the claims and as set forth the examiner believes that Viens discloses the "a folding mode...wherein a plurality of modes of folding can be applied on the sheet by a single sheet path," see for example (Figs. 5B, 6B, and 7B; via same bath by stations 5a, 5b, 6a, 6b, 7a, and 7b). Alternatively, applicant amended claims 1 and 16 using "can" which the examiner strongly believes that Viens's reference with it's plurality of modes of folding "can" be applied on the sheet by a single sheet path.

The applicant also argue in page 10 of the arguments that Viens discloses different configurations of the sheet paths which shown in Figs. 5A-5B, 6A-6B, and 7A-7B. The examiner also as set forth likes to attract the applicant's attention to the same mentioned drawings by stations (5a, 5b, 6a, 6b, 7a, and 7b) which all are same path for the sheets as in feed path before directing the sheet to different paths fore different modes.

The applicant further argue in page 10 of the arguments that folding of sheets to different letter Z-folding and letter C-folding and Z-folding with the present invention requires only a single configured sheet path and applicant also asserts that newly amended independent claims 1 and 16 are distinguishable over the applied art. The examiner as set forth believes that Viens's

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reference discloses folding the sheet in different modes as disclosed on (Figs. 5B, 6B, and 7B) by using single path (via 5a, 5b, 6a, 6b, 7a, and 7b).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is 571-272-4470. The examiner can normally be reached on Tuesday - Friday from 8:00 AM to 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sameh H. Tawfik
Patent Examiner
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ST.

A handwritten signature in black ink, consisting of a large, stylized 'S' followed by a horizontal line and a large, sweeping loop.